

REMARKS

1. *Status of the Application.* Claims 1, 3-21, and 23-50 are pending in the application. In the Office Action, claims 1, 4, 6, 7, 10-12, 17-19, 22, 24, 26, 27, 30-32, and 37-39 were rejected under 35 U.S.C. § 102, and claims 3, 5, 8, 9, 13-16, 20, 23, 25, 28, 29, 33-35, and 40 were rejected under 35 U.S.C. § 103. Claims 1 and 21 are amended herein. No new matter is added by way of these amendments.
2. *The Section 102 Rejections.* Claims 1, 2, 4, 6, 7, 10-12, 17-19, 21, 22, 24, 26, 27, 30-32, and 37-39 were rejected under 35 U.S.C. § 102 as being anticipated by U.S. Patent No. 5,163,586 to Zinsmeyer (“Zinsmeyer”). The Office Action alleges that each element of the invention recited in claims 1 and 21 is disclosed by *Zinsmeyer*.

It is believed that the foregoing amendments to claims 1 and 21 provide abundant distinction between the present invention and *Zinsmeyer*. In particular, claim 1 has been amended herein to recite the following distinguishing elements:

at least one sensor, coupled to said control circuitry and to said hydraulic module, for acquiring data reflecting actual operation of said hydraulic module over time;
processing circuitry, coupled to said at least one sensor, for comparing said data reflecting actual operation of said hydraulic module over time with data corresponding to target operation of said hydraulic module;
wherein said controlled amount of said additive is adjusted based upon said comparison of data reflecting actual operation of said hydraulic module with said data corresponding to target operation of said hydraulic module.

Claim 1.

This language is intended to capture the essence of the so-called “adaptive metering” functionality of the present invention, which is described in the specification as follows:

“Since the timing sequences for the opening and closing of solenoid valves can be affected by operating temperature, fluid pressure, flow rate, valve wear, solenoid type (e.g., AC or DC), and other factors, all of which can impact

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metered volume, dispensing unit 102 maintains *a real-time log of valve timing, cumulative additive volume injected since a predetermined starting point and target cumulative volume injected. This data is processed by computer-controlled algorithms to enable automatic sensing, correction, and ensuing adjustment of subsequent valve timing and injected volumes to optimize metering accuracy.* In one embodiment, adjustment of valve timing and injected volumes can be based upon assessment of past performance of the metering system and current hydraulic conditions as detected by the various sensors in the hydraulic module. This is referred to as ‘adaptive metering’ functionality.”

Specification, p. 15, lines 2-12 (emphasis added).

It is submitted that such functionality, as reflected in the excerpted language from claim 1 above, is neither taught nor suggested in *Zinsmeyer*.

Likewise, claim 21 has been amended herein to capture the essence of the adaptive metering functionality in accordance with the present invention. In particular, claim 21 has been amended to recite, in part:

- (d) obtaining measurements of actual performance of said hydraulic module;
- (e) comparing said measurements of actual performance of said hydraulic module to target values;
wherein said controlled amount of said additive is adjusted based upon said comparison of said measurements of actual performance of said hydraulic module to said target values.

Claim 21.

Again, it is respectfully submitted that the excerpted elements of claim 21 above are neither taught nor suggested by *Zinsmeyer*. Reconsideration and withdrawal of the rejection of claims 1 and 21 is therefore requested.

As to the remaining § 102 rejections, each remaining claim depends from and further limits either claim 1 or claim 21. In view of the failure of *Zinsmeyer* to teach or suggest the invention of either claim 1 or claim 21, it is submitted that *Zinsmeyer* necessarily fails to teach or suggest the invention of the remaining claims. Reconsideration and withdrawal of the rejection of the dependent claims is therefore also requested.

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5. *The Section 103 Rejections.* Claims 3, 5, 8, 9, 13-16, 20, 23, 25, 28, 29, 33-35, and 40 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Zinsmeyer* in view of various other references. As discussed below, the Assignee respectfully challenges this rejection.

Claims 3, 5, 8, 9, 16, 20, 23, 25, 28, 29, and 40 were rejected as being unpatentable over *Zinsmeyer* in view of U.S. Patent No. 6,052,629 to Leatherman et al. ("*Leatherman*"). According to the Office Action, *Leatherman* discloses a graphics-based, Internet-based fuel dispenser.

It is believed that the foregoing remarks regarding the § 102 rejections are equally applicable to the § 103 rejections, inasmuch as it is believed that *Zinsmeyer* fails to teach or suggest a fuel additive dispensing system in which the amount of additive dispensed is adjusted based upon a comparison of data reflecting actual performance of the hydraulic module with target performance data. With regard to this functionality, *Leatherman* adds nothing of relevance, such that no *prima facie* case of obviousness is established. That is, neither *Zinsmeyer* nor *Leatherman* teaches or suggests assessing the past performance of the hydraulic module that dispenses additive in order to adjust the amount of additive dispensed in subsequent transactions, such that even if the proposed hypothetical combination of *Zinsmeyer* and *Leatherman* were made, the literal language of the claims would not be met. Reconsideration and withdrawal of the § 103 rejection of claims 3, 5, 8, 9, 16, 20, 23, 25, 28, 29, and 40 is therefore requested.

Claims 13-15 and 33-35 were rejected under § 103 as being unpatentable over *Zinsmeyer* in view of *Leatherman* and further in view of U.S. Patent No. 5,596,501 to Comer et al. ("*Comer*"). According to the Office Action, the proposed hypothetical combination of *Zinsmeyer* and *Leatherman* fails to disclose the use of a proximity detector for detecting the presence of a customer at a fuel pump. It is believed that this distinction is moot, however, in view of the failure of the fact that neither *Zinsmeyer*, *Leatherman*, nor *Comer* teaches or suggests the adaptive metering functionality disclosed and claimed in the claims at issue. Thus, even if the proposed *Zinsmeyer/Leatherman/Comer* combination were made, this would fail to achieve a system as disclosed and claimed in the present application. Reconsideration and withdrawal of the § 103 rejection of claims 13-15 and 33-35 is therefore respectfully requested.

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CONCLUSION

In view of the foregoing amendments and remarks, it is believed that each of the pending claims in the present application recites subject matter neither taught nor suggested by the prior art, and that the application as a whole is in proper form and condition for allowance. Reconsideration and withdrawal of the objections and rejections is therefore requested, such that the application may advance to issue at the earliest possible date. If the Examiner believes that the application can be placed in even better condition for allowance, he is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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